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MANAGEMENT OF NON-RECREATION RESOURCES
IN MANAGEMENT AREAS EMPHASIZING
SEMI-PRIMITIVE RECREATION

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Title:

Management of Non-Recreation Resources in Management
Areas Emphasizing Semi-Primitive Recreation

Abstract:

The purpose of this study was: 1.) To interpret existing management direction for management areas identified in Forest Plans for emphasis on semi-primitive recreation, and 2.) To develop a process for planning non-recreation uses in these areas that includes the considerations necessary to ensure consistency with the management direction. A review of existing management direction concludes that the intent of management area prescriptions emphasizing semi-primitive recreation is to allow for non-recreation resource uses necessary to meet non-recreation goals and objectives to the extent such uses can occur and still maintain the semi-primitive setting of the area upon completion of the project. The setting characteristics of the semi-primitive recreation classes are reviewed, and the possible effects of non-recreation projects on these characteristics are discussed. Measures which mitigate effects that detract from the semi-primitive characteristics are also discussed. A process for considering proposals for non-recreation projects is outlined.

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Summary: The purpose of this study was: 1.) To interpret existing management direction for management areas identified in Forest Plans for emphasis on semi-primitive recreation, and 2.) To develop a process for planning non-recreation uses in these areas that includes the considerations necessary to ensure consistency with the management direction. The study was considered necessary because land managers have expressed uncertainty as to how to plan for and manage non-recreation uses currently being proposed in management areas emphasizing semi-primitive recreation. The study began with a review of the existing management direction and an interpretation was made as to the intent of the management area prescriptions. This was followed by a review of the setting characteristics which determine the semi-primitive recreation opportunity class. Next, the possible effects of non-recreation projects on the semi-primitive setting characteristics were identified along with possible measures which could be used to mitigate adverse effects on the setting characteristics. These possible effects were compared against the intent of the management prescriptions to determine the considerations necessary in order to plan a non-recreation project in these areas. A process for this consideration was developed.

The review of the existing management direction resulted in the conclusion that the intent of management area prescriptions emphasizing semi-primitive recreation is to allow for non-recreation resource uses necessary to meet non-recreation goals and objectives to the extent such uses can occur and still maintain the semi-primitive setting of the area upon completion of the project.

The semi-primitive recreation classes are part of the Recreation Opportunity Spectrum (ROS) as described in the Forest Service's ROS User's Guide. Each ROS class is defined by three setting components: the physical, social, and managerial settings. The physical setting is, in turn,

defined by three criteria: remoteness, size of area, and evidence of humans. The social setting refers to the type and amount of contact the recreationist will likely have with other individuals and groups. The managerial setting refers to the amount and kind of restrictions placed on people's actions by the administering agency.

The semi-primitive class is characterized by an area of at least 2,500 acres in size which is at least one-half mile from constructed roads. Any evidence of humans would be subtle and not draw the attention of a person wandering through the area.

Non-recreation projects could have possible effects on all of the setting characteristics. The physical setting will be affected by any activities which introduce inconsistencies due to roads, topographic or vegetative disturbances, structures, noise, or pollution. The social setting will be affected by the presence of work crews, and the managerial setting will be affected to the extent restrictions on recreation use are imposed as a result of the project.

The possible effects on the setting characteristics can be categorized as either short-term (occurring only during the project) or long-term (continuing after completion of the project). Long-term effects which are not consistent with the retention of the semi-primitive setting should cause the project to be abandoned or relocated to another management prescription with which it is compatible. The only other alternative available is to amend the Forest Plan to change the management prescription to one compatible with the proposal. The short-term effects which are inconsistent with the maintenance of the semi-primitive character of the area can often be mitigated to the point where they are acceptable. This must be determined through scoping and the environmental analysis process.

In considering individual proposals for non-recreation uses in semi-primitive areas, the possible effects of the proposed project on the semi-primitive characteristics of the area need to be identified and categorized as long-term or short-term. If it is not practical to mitigate the long-term effects to the point where the semi-primitive setting is retained, then the project must be handled as explained in the preceding paragraph. If there will be no long-term effects which cannot be satisfactorily mitigated, then all the other effects on the semi-primitive setting should be displayed during the scoping phase of the environmental analysis of the project. The environmental analysis may lead to a decision to proceed as proposed, proceed with additional mitigation, or reject the proposal.

I. INTRODUCTION

The Land and Resource Management Plan (Forest Plan) for the Medicine Bow National Forest was completed in 1985. This plan subdivided the Forest into a number of management areas, each with its own resource management emphasis and prescription. In the Medicine Bow Forest Plan there are several management areas identified where the emphasis is on semi-primitive recreation. The Forest Plan schedules some of these areas for non-recreation projects, such as vegetative treatments, within the next few years. Planning for these projects is currently underway. Non-Forest Service proponents are also currently making proposals for non-recreation uses, such as electronic sites and water diversion projects, in some of these areas. Land managers have expressed uncertainty as to what non-recreation uses can be allowed in these areas or, if allowed, what conditions must be applied to such uses, since the Plan is not specific in this regard. This uncertainty was the impetus for this study.

The requirements of the Forest Plan are relatively new to land managers since it is the first plan for the Forest completed under the requirements of the National Forest Management Act of 1976 (NFMA). It includes Forest Direction consisting of goals, objectives, and management requirements which are applicable over the entire Forest. The Plan also subdivides the Forest into a number of management areas each with a specific management prescription which emphasizes a particular resource use.

Although each Management Area Prescription has a single emphasis, all are multiple-use prescriptions. This means that even if the management emphasis is on semi-primitive non-motorized recreation, non-recreation uses may occur in the same area provided they are compatible with the objectives for the area, in this case, maintenance of the semi-primitive non-motorized recreation opportunities.

The term "semi-primitive" as used in the Forest Plan refers to a class within the Recreation Opportunity Spectrum (ROS), a concept which has developed over a period of many years beginning in the 1960's. It is only within the last ten years, however, that the ROS concept has developed to the point that it has been sufficiently defined to make it a useful tool; and, it is only within the last five years that the use of the ROS has begun to be widely used as a planning and management tool by the Forest Service.

The basic premise of the ROS concept is that people's preference for outdoor recreation experiences extends over a broad spectrum or continuum. The ROS defines six classes within this continuum: Primitive, Semi-Primitive Non-Motorized, Semi-Primitive Motorized, Roaded Natural, Rural, and Urban. Each class is defined in terms of activity, setting, and experience opportunities. The ROS can be used to inventory

and define recreation opportunities, categorize recreation demand, and define recreation management objectives.

In areas with a Management Area Prescription emphasizing a specific ROS class, the potential exists that projects to develop non-recreation resources may detract from the recreation setting to the extent that the desired experience opportunities are no longer available. This potential becomes greater near the primitive end of the spectrum where the experiences provided by the setting are more sensitive to the evidence of human activity.

Because the requirements of the Forest Plan are new and the ROS System is a relatively new concept, many managers at the Forest and District level are uncertain as to how to plan for and manage non-recreation uses currently being proposed in management areas where the emphasis is on a specific ROS class. This paper will address this problem for those areas allocated to a management prescription where the emphasis is on semi-primitive non-motorized or semi-primitive motorized recreation.

II. PURPOSE

The purpose of this study was:

1. To review existing management direction and make an interpretation as to the management intent for management areas emphasizing semi-primitive non-motorized or semi-primitive motorized recreation, and
2. To develop a process for use by the land manager that includes the considerations necessary in planning non-recreation uses in these areas to ensure consistency with the management direction.

This study looked only at Management Area Prescriptions 2A and 3A as described in the Land and Resource Management Plan for the Medicine Bow National Forest and Thunder Basin National Grassland. These Management Area Prescriptions emphasize semi-primitive motorized and semi-primitive non-motorized recreation, respectively. Since these Management Area Prescriptions are basically uniform throughout the Rocky Mountain Region, the results of this study should be applicable on any Rocky Mountain Region Forest having these management area prescriptions. The results should also be applicable in other Regions where similar management area prescriptions are used in Forest Plans.

III. LITERATURE REVIEW

A review was made of the existing literature regarding the ROS and multiple-use management in semi-primitive areas. Most of the literature on the ROS either describes the ROS or discusses management of recreation in various ROS classes. No literature could be found addressing the specific problem of managing non-recreation resource uses in areas emphasizing a specific ROS Class.

The report "Predicting Impact of Noise on Recreationists" (Harrison, et al. 1980) addressed a small part of the problem indirectly, as did a related report addressing noise impacts of recreationists (Stankey, 1982). These reports stated that "either the impact is acceptable and does not detract from the experience or the impact is unacceptable and does detract from the experience." Although discussing only the noise impacts of recreation use, this is a recognition that managers must consider the impacts of their decisions on the recreation experience as defined by the ROS. In the report "The Limits of Acceptable Change (LAC) System for Wilderness Planning" (Forest Service, 1985), reference is also made to the need to assess the effect of recreation impacts on the setting characteristics of the appropriate ROS class of the area.

Since there was no literature directly related to the subject of this study, it was necessary to review the existing management direction and interpret the intent for management of areas emphasizing semi-primitive recreation opportunities. This included a review of NFMA, the NFMA Regulations, the Forest Service Manual, and the Forest Plan and its accompanying Environmental Impact Statement (EIS).

The study necessitated a comparison of the possible effects of non-recreation uses on the setting characteristics for the semi-primitive classes as described in the literature. The ROS User's Guide (Forest Service, 1982), which is the official guide for Forest Service use in describing ROS classes, was used as the basic reference for this. It is basically a reiteration of several earlier documents on the subject.

IV. METHODOLOGY

This study was conducted utilizing the following process of analysis:

1. Existing management direction was reviewed and an interpretation made as to the management intent for management areas emphasizing semi-primitive recreation.
2. The characteristics of the semi-primitive non-motorized and semi-primitive motorized ROS classes were identified from a review of the literature.
3. The possible effects of non-recreation projects on these ROS characteristics were then enumerated.
4. The possible effects were then compared against the intent of the management direction to determine the considerations that are necessary in planning a non-recreation project to ensure its consistency with the management direction. This resulted in the defining of a process for considering such project proposals.

The findings of the study were reviewed by and discussed with various professionals at the district and forest levels of the Forest Service, and with the outdoor recreation staff at the University of Wyoming.

V. ANALYSIS

REVIEW OF EXISTING MANAGEMENT DIRECTION

The National Forest Management Act of 1976 (NFMA) requires the development of land and resource management plans (Forest Plans) for each National Forest. This law directs that such plans shall be developed under the principles of the Multiple-Use, Sustained-Yield Act of 1960. NFMA also requires that resource plans and permits, contracts, and other instruments for the use and occupancy of the National Forest System lands shall be consistent with the land management plans.

The Multiple-Use, Sustained-Yield Act of 1960 defines multiple-use as "the management of all the various renewable surface resources so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output." (Forest Service, 1983). This definition implies that a specific area may be managed for a specific purpose or objective (emphasis), but any such area is also available for all other uses which are compatible with the stated emphasis.

NFMA also required the Secretary of Agriculture to promulgate regulations to implement the requirements of the Act. These regulations reiterate that Forest Plans are developed under the principles of multiple-use and sustained-yield. They also require the development of multiple-use prescriptions and associated standards and guidelines for each management area (36 CFR 219.11(c)). Further, the regulations require that a broad spectrum of recreation opportunities be provided for in each alternative (36 CFR 219.21). The Forest Service Manual (FSM 2311.1 and 1922.15) requires use of the ROS to delineate, define, and integrate outdoor recreation opportunities in land and resource management planning.

The Forest Plan for the Medicine Bow National Forest states that the management area prescriptions identify the primary management emphasis, but all are multiple-use prescriptions. The Management Area Prescription Summaries for Management Prescriptions 2A and 3A (emphasis is on semi-primitive motorized and semi-primitive non-motorized opportunities, respectively) specifically refer to other resource management activities such as landscape management, timber harvest, mineral activities, and grazing.

A review of the Forest Plan indicated a recognition that, during project implementation, some impacts inconsistent with the management emphasis may be necessary and acceptable. For example, local road construction is

mentioned in the management prescription for areas emphasizing semi-primitive non-motorized recreation, even though such an action would require use of motorized equipment. This led to the conclusion that short-term (during project) impacts which detract from the prescribed ROS characteristics of the area may be acceptable; but, this can be ascertained only through environmental analysis of the individual project.

The outputs listed in the EIS for the Medicine Bow Forest Plan were based on the assumption that management areas emphasizing specific ROS classes would provide the prescribed recreation opportunities throughout the period of the Plan. At the same time, outputs of non-recreation resources were shown for these same areas, although not necessarily to the same extent as for management areas with a non-recreation emphasis.

This review of the existing management direction, including the laws, regulations, Forest Service Manual, the Forest Plan, and the EIS led to the conclusion that the management intent for management areas emphasizing semi-primitive recreation is to:

1. Ensure that the prescribed semi-primitive ROS class setting is maintained so that semi-primitive recreation opportunities are provided now and in the future.
2. Allow other resource uses necessary to meet non-recreation multiple-use goals and objectives included in the Forest Plan to the extent they are compatible with the retention of the semi-primitive setting of the area. These other resource uses may be for the purpose of achieving goals and objectives unrelated to recreation, but they must not detract from the ability of the area to provide a semi-primitive recreation setting following completion of the project.

It is important to remember that the ROS is a continuum and each class represents a range of settings. Non-recreation uses may result in changes to the recreation setting, but the change may not be great enough to move it into another ROS class. Also, there is no precise delineation between classes, so some judgement may be necessary in deciding whether or not the desired ROS setting is being retained.

Special attention needs to be given to the intent for management of minerals in these management areas. Some of these management areas are recommended for withdrawal from entry under the General Mining Laws. Some are identified as available for leasing only with no surface occupancy. Some areas will have no specially identified limitations on mineral entry or leasing. In these latter areas, mineral activities could conceivably result in some conflict in the future. Since these areas are not withdrawn, they are available for entry for the purpose of exploration and development of the mineral resource under the General Mining Laws and/or for leasing.

Forest Service Regulations relating to mining (36 CFR 228) require Forest Service approval of proposed operations. The land manager can require

all reasonable measures needed to protect the area and its surface resources. Normally, during the exploration phase the manager will have sufficient control over operations to protect the semi-primitive characteristics of the area. However, should a valuable deposit be found that can reasonably be developed only by means which will change the ROS characteristics of the area, then such development must be allowed. This is a recognition during the planning process that semi-primitive recreation had the highest relative value of all the surface resources, but it was not considered of higher relative value than a significant mineral deposit, should one be discovered in the area.

In areas where there are no specific limitations on leasing, it is again a recognition during the planning process that the mineral resource is considered to be of higher relative value than the recreation resource. In these areas leasing may occur even though it could result in an ultimate conflict. Normally, exploration could be accomplished with sufficient mitigation requirements to protect the semi-primitive characteristics of the area; however, development and production would likely have adverse effects on the semi-primitive characteristics, but would have to be allowed.

An apparent inconsistency exists in one of the General Direction statements for Management Area Prescription 3A (emphasis is on semi-primitive non-motorized recreation). The statement referred to states, "Local roads may be constructed for non-recreation purposes." At first glance this statement would seem inconsistent with the emphasis for the area. However, if it is recognized that such roads must be properly reclaimed upon completion of the non-recreation project, then it becomes clear that the statement is entirely consistent with both the emphasis for the area and the multiple-use nature of the prescription.

In summary, the management intent for management areas emphasizing semi-primitive recreation is to allow non-recreation uses to the extent that they can occur and still maintain a semi-primitive ROS setting upon completion of the project.

REVIEW OF ROS SETTING CHARACTERISTICS

The various classes in the Recreation Opportunity Spectrum are characterized by three setting components: the physical, social, and managerial settings. The physical setting is defined by three criteria: remoteness, size of area, and evidence of humans. The social setting refers to the type and amount of contact with other individuals or groups. It relates to opportunities for solitude or for interaction with other groups. The managerial setting refers to the facilities and services provided, and the amount and kind of restrictions placed on people's action by the administering agency. Restrictions could be either regulatory or physical (barriers). Facilities and services include sanitary facilities, designated campsites, trail and road maintenance, information, opportunities for contact with Forest officers, etc.

The following discussion will describe the characteristics of the semi-primitive motorized and semi-primitive non-motorized ROS classes by setting component. Because the setting characteristics of these two classes are very similar they are discussed together. The main distinction between the two is whether or not motorized use occurs in the area. Semi-primitive non-motorized areas tend to be more toward the primitive end of the spectrum than the semi-primitive motorized areas, although there is considerable overlap in most of the setting characteristics of the two classes.

The remoteness criteria for the physical setting describes the semi-primitive (motorized and non-motorized) class as an area not closer than 1/2 mile from "better than primitive roads." "Better than primitive roads" are defined as constructed or maintained vehicle ways for the use of highway type vehicles having more than two wheels. "Primitive roads" are not constructed or maintained, and are used by vehicles not primarily intended for highway use. The semi-primitive area must be at least 2,500 acres in size unless contiguous to a primitive class area. Under the evidence of humans criteria, a semi-primitive area is characterized by a natural appearing landscape which may have subtle modifications that would not draw the attention of an observer traveling through the area. Structures are rare and isolated.

The social component of the semi-primitive classes is characterized by a low to moderate frequency of contact with other groups or individuals. The managerial component provides that regimentation and controls may be present, but should be subtle.

It is apparent that at least some of the characteristics of the semi-primitive classes provide for a fairly broad range of settings. It must be remembered that the ROS is a continuum. This means that an area classified as semi-primitive may vary from nearly primitive to nearly rural natural in character. This indicates that non-recreation uses could have effects which move the setting toward that of the rural natural setting and still be consistent with the Forest Plan prescription.

EFFECTS OF NON-RECREATION PROJECTS ON ROS CHARACTERISTICS

Non-recreational resource management activities can have an effect on all of the setting characteristics described in the previous section. These effects could be either short-term or long-term. For purposes of this discussion, short term effects are those that are evident only while the project is in progress, or until revegetation of disturbed areas has been completed. The Forest Plan requires revegetation, which is defined as the reestablishment and development of a cover crop, to be initiated by the growing season following disturbance. Long-term effects are those that will still be evident any time after the short-term described above. The following discussion will look at each of the setting characteristics and identify how the characteristic could be affected by non-recreation management activities.

PHYSICAL SETTING

REMOTENESS CRITERIA

Remoteness of an area will be affected by any additional road access into the area. If these roads are better than primitive roads which are open to the public, then the area within 1/2 mile of these roads will no longer have the characteristics necessary for a semi-primitive setting. If these better than primitive roads are closed to the public, remoteness of the area will not be changed; however, the presence of the roads themselves may have effects on other setting characteristics (see the discussion on the "evidence of humans" criteria). The creation of additional primitive roads in the area would not remove the area from the semi-primitive category, although it could change the area from semi-primitive non-motorized to semi-primitive motorized if the roads are open to public use. Closing of additional primitive roads in a semi-primitive non-motorized area would retain the semi-primitive character of the area. Other types of management activities will not affect the remoteness characteristics of an area, per se.

SIZE OF AREA CRITERIA

Any management activities which introduce characteristics inconsistent with the semi-primitive character of the area may reduce the size of the area; however, this criteria cannot be evaluated by itself since it is dependent on the effects of activities on other semi-primitive characteristics. Basically, for purposes of this discussion, the size of the area has been set by the size of the management area identified in the Forest Plan.

The primary factor influencing size is the proximity of better than primitive roads. Therefore, it should be recognized that construction of roads in management areas adjacent to a management area emphasizing semi-primitive recreation can affect the size of the area actually having semi-primitive characteristics. That is, any "better than primitive roads" constructed within 1/2 mile of a semi-primitive area will reduce the area which actually has semi-primitive characteristics, even though the roads are not actually within the management area which emphasizes semi-primitive recreation.

EVIDENCE OF HUMANS CRITERIA

Whether or not management activities provide evidence of humans is, to a large extent, a matter of individual perception. This perception will be affected by the location and viewing direction of the individual relative to the

activity. The perception will also be influenced by the apparentness or subtlety, scale, frequency, and duration of the activity. Also, the speed of the traveler will affect his perception of whether or not a modification of the landscape is present. For this reason, semi-primitive motorized areas can take somewhat more modification without adversely affecting the semi-primitive characteristics of the area than can semi-primitive non-motorized areas.

Rather than attempt to identify and discuss all possible management activities that could affect an area, it is more reasonable to categorize the effects various management activities could have on the setting that would produce evidence of humans. These categories are:

1. Topographic disturbance (including soil disturbance)
2. Vegetative disturbance
3. Structural intrusions
4. Noise
5. Pollution (air, water, litter, etc.).

Each of these categories of effects will be discussed separately.

TOPOGRAPHIC DISTURBANCE

Typical activities causing topographic disturbance include road construction, drill pad construction, and similar activities that require moving earth. When viewed while the activity is occurring, this effect would be considered evidence of humans by virtually everyone. After completion of the activity this effect may or may not be perceived as evidence of humans by the average recreation user of the area. If the area is reclaimed to its original or similar contours, revegetated, and landscaped to blend with surrounding vegetation, the average user may not perceive any evidence of humans, particularly if it were not viewed in the foreground of areas of recreation activity or normal travel routes through the area. Also, if reclaimed as described, the area would again qualify for inventory as semi-primitive.

If the area is not reclaimed as described above, then the effect may or may not be perceived as evidence of humans by the average user. An unreclaimed road (whether open or closed to the public) would likely be perceived as evidence of humans by the average user and would cause the disturbed area and 1/2 mile around it to be excluded from the area inventoried as semi-primitive. An isolated disturbance such as a small drill pad, especially if located in an area not normally seen in the foreground of normal travel routes, may not be perceived as evidence of

humans by many users. Although it would likely be recognized as an inconsistency during the inventory at the next round of planning, such isolated and infrequent inconsistencies likely would not prevent the area from being inventoried as semi-primitive.

VEGETATIVE DISTURBANCE

Activities that disturb vegetation (other than activities which also disturb the ground) include cutting of trees, burning, spraying of herbicides, and mechanical treatments such as chaining.

The average user may perceive some vegetative disturbances as evidence of humans and not others. Large clearcuts with stumps left would likely be perceived as evidence of humans by the average user and would detract from the semi-primitive nature of the area. Smaller clearcuts without stumps showing would likely be unnoticed by the average user if the openings appear natural. Selective cutting would also likely be little noticed by the average user. Burned areas would likely not be recognized by the average user as evidence of humans since the average user recognizes that fires are a naturally occurring phenomenon. Vegetation killed by herbicides may not be recognized as evidence of human by the average user as the appearance may not differ much from vegetation killed by fire, insects, or disease. If the herbicide killed vegetation appears different from what might be found naturally, the average user would likely recognize it as evidence of man. Mechanically treated areas are more likely to be recognized as a result of man's activity than other vegetative treatments.

Due to recovery of vegetation and natural decay and deterioration of remnant debris (stumps, etc.), vegetative disturbances, even when evidently man caused, are not likely to result in the permanent loss of the semi-primitive character of the area. However, unless proper mitigation measures are taken these effects will be long-term and are not compatible with a semi-primitive management prescription.

STRUCTURAL INTRUSIONS

Almost any man-made structure will be recognized as such by the average user and thus will detract from the semi-primitive character of the area if seen by the user. Structures made of natural materials are likely to be perceived as detracting less than those made from manufactured materials; however, this may not always be

true, especially if a structure made of natural materials is visually more obvious.

The frequency of encountering structures will also affect the extent to which they detract from the semi-primitive character of the area. A few isolated structures will detract less than many frequently encountered structures.

Structures which are less obvious or not seen from normal travel routes will detract little from the semi-primitive character of the area. Unless the structures are obviously inconsistent with the semi-primitive character of the area or are numerous throughout an area or part of an area, they will not normally disqualify the area from being inventoried as semi-primitive.

NOISE

Normally, noise associated with management activities will have only a short-term effect on the semi-primitive character of the area. In certain situations, however, the effect could be considered long-term, e.g., an oil well pump that operates more or less continuously for a period of years.

The effect of noise on the semi-primitive character of the area will depend upon its nature, frequency, duration, intensity, location relative to the user, and the presence of buffering vegetation or topography.

Noise of a mechanical nature may be perceived as more detracting than the noise of normal voices. The more frequent a noise occurs, the longer it lasts, the greater its intensity, and closer it is to the recreationist, the more it will detract from the semi-primitive character of the area. Intervening vegetation and topography can reduce the intensity of noise as perceived by the recreationist.

POLLUTION

Management activities can cause pollution which can detract from the semi-primitive character of the area. An example is litter which produces direct evidence of humans. Other examples are smoke from burning operations, odors from herbicide or insecticide spraying, and muddy water due to runoff from disturbed areas. Normally, these effects are short-term or can readily be mitigated. They should not normally result in a long-term effect.

SOCIAL SETTING

The effects of management activities on the social setting are invariably short-term and the result of recreationist coming into contact with work crews or otherwise being aware of their presence. How this affects the semi-primitive character of the area will depend to some extent on how appropriate the recreationist perceives the activity. For example, the recreationist may see a trail maintenance crew as performing an appropriate activity and, therefore, not perceive it as detracting from his experience. On the other hand, a crew involved in a core drilling operation may be perceived as inappropriate for the area and detract from the recreationist's experience.

MANAGERIAL SETTING

Non-recreation activities in semi-primitive areas are likely to affect the managerial setting only if restrictions on recreation use of the area are imposed as a result of the activity. For example, reclaimed roads may be closed to public use to allow vegetation to become reestablished, or an area may be closed in order to protect the public during a time when activity is occurring that could be a safety hazard. The more restrictions that are placed on the public, the greater will be the detraction from the semi-primitive character of the area. Normally, these effects are short-term in nature.

The preceding discussion was limited largely to the effects of a single activity. It must be recognized that even though a single activity may detract little from the semi-primitive setting, the cumulative effect of many such activities could have a significant effect. For example, a single small clearcut may not detract at all from the semi-primitive setting, but several such clearcuts may detract to the point that the area no longer provides a semi-primitive setting. For this reason it is important that consideration be given to the cumulative effects of not only the project under consideration, but other projects in the area also.

PROCESS FOR CONSIDERING PROPOSALS FOR NON-RECREATION ACTIVITIES

From the preceding analysis of the possible effects of non-recreation projects, it is apparent that a wide range of activities can occur in areas emphasizing semi-primitive recreation without adversely affecting the long-term retention of the desired recreation setting. It is also apparent that such activities can, if not properly managed, have adverse long-term effects on the semi-primitive setting. Also, it must be recognized that mitigation measures have costs, and such cost may make implementation of a proposed project impractical. However, recreation also provides economic benefits, although not always easily quantifiable. During the Forest Planning process, management areas allocated to

semi-primitive recreation were so allocated because the semi-primitive opportunities of the area were considered to be of higher relative value than other resource use opportunities.

The review of the existing management direction concluded that non-recreation uses are compatible with the management intent for areas emphasizing semi-primitive recreation, provided the desired recreation setting is maintained. Projects which do not provide for retention of the semi-primitive setting upon completion of the project are not compatible with the management prescription for these areas. The key question to be answered is, "Will the project area be included in the area qualifying for inventory as semi-primitive upon completion of the project?" If the answer is no, the project is incompatible with the management prescription.

Projects which detract from the semi-primitive setting only in the short-term (during project implementation) may or may not be acceptable. Such projects must be evaluated individually through the environmental analysis process to determine their acceptability. It must be remembered that the management intent for these areas is to provide a continuing supply of semi-primitive opportunities. If the short-term effects are such that the management area, as a whole, will not provide such opportunities in the short-term, then the project should be considered incompatible with the management prescription. This is not to say that all parts of the management area must provide semi-primitive opportunities at all times during the short-term.

It is important that any non-recreation activity proposed in a management area emphasizing semi-primitive recreation be carefully considered and planned in order to ensure its compatibility with the intent of the management area prescription. A logical process for this consideration and planning is as follows:

1. Identify the possible effects the proposed project may have on the setting characteristics for the semi-primitive class, i.e., physical, social, and managerial. Frequent reference should be made to the ROS User's Guide during this step. This analysis should identify each effect as either long-term or short-term.
2. Determine if it is practical to mitigate the possible long-term effects to the point where the semi-primitive settings will still exist upon completion of the project. If the possible long-term effects cannot be so mitigated, the proposal is not compatible with the management area prescription.
3. Utilize the list of short-term effects from step 1 and the list of long term effects which can be satisfactorily mitigated from step 2 in the scoping phase of the normal environmental analysis process. The recreation users of the area should be given the opportunity to identify their concerns relative to the possible effects and mitigation measures needed.

In the second step outlined above, if the determination is made that the long-term effects cannot be practically mitigated to retain the semi-primitive character of the area, then the manager has three choices:

1. reject or abandon the proposal,
2. relocate the project to another area where it will be compatible with the management prescription, or
3. amend the Forest Plan to change the management prescription for the area to one which will be compatible with the proposal.

If a proposal seems to be acceptable from the long-term standpoint, the environmental analysis may still conclude that the proposal is not acceptable for a number of reasons, e.g., necessary mitigation measures are too costly to make it practical, public will not accept the short-term effects on the semi-primitive setting, other environmental considerations make the proposal unacceptable, etc. In this case, the manager will again have the choices outlined in the preceding paragraph.

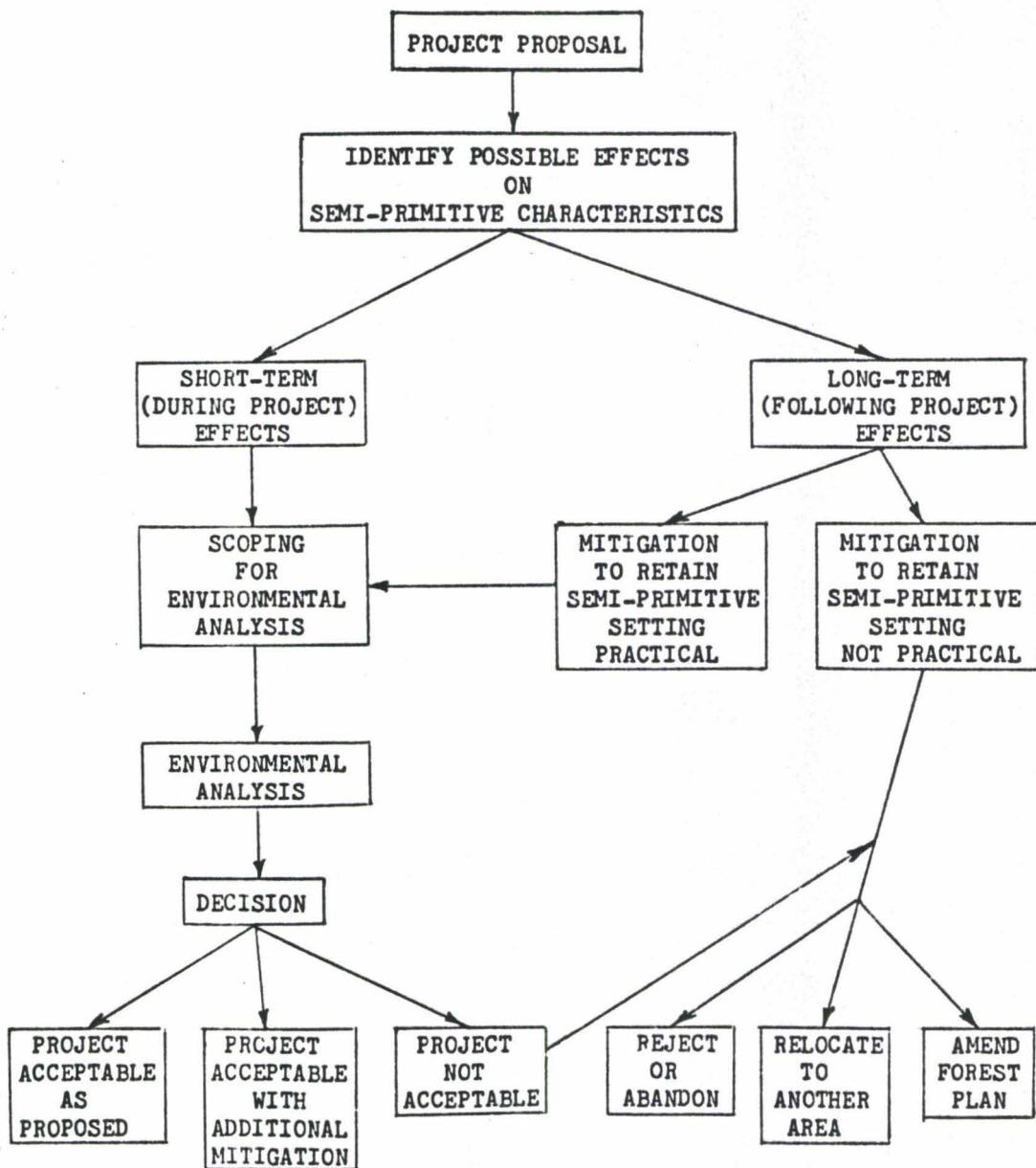
During the environmental analysis process a wide range of mitigation measures need to be considered including design, location relative to travel routes and recreation activity opportunities, timing relative to recreation activity, and reclamation standards. As a minimum, the mitigation for the project must ensure the long-term retention of the semi-primitive recreation setting.

The above process is outlined in chart form on the following page.

VI. SUMMARY

The catalyst for this study was the uncertainty expressed by land managers about how to plan for and manage non-recreation uses currently being proposed in management areas emphasizing semi-primitive motorized or non-motorized recreation. The study addressed the considerations necessary to practice multiple-use management in these management areas. It concluded that existing management direction provides that such management areas are available for any non-recreation resource use provided the semi-primitive setting of the area is retained. The study discussed the possible effects non-recreation uses could have on semi-primitive setting characteristics. It also outlined a process for considering proposals for non-recreation resource uses in these areas. This process requires consideration of the effects the proposed project could have on the semi-primitive characteristics of the area. If the effects cannot be mitigated to the point where the semi-primitive setting of the area is retained, then the proposal must be either abandoned or relocated, or the Forest Plan amended to change the management prescription.

FLOW CHART
FOR CONSIDERATION OF
NON-RECREATION PROJECTS
IN AREAS EMPHASIZING
SEMI-PRIMITIVE RECREATION



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APPENDIX A

CHAPTER III - MANAGEMENT DIRECTION

(From the Land and Resource Management Plan for the Medicine Bow N.F.)

CHAPTER III

MANAGEMENT DIRECTION

IMPLEMENTATION

This Forest Land and Resource Management Plan provides long-range management direction for the Medicine Bow National Forest.

As soon as practicable after the Plan is approved, the Forest Supervisor will ensure that, subject to valid existing rights, all outstanding and future permits and other occupancy and use documents which affect National Forest System lands are consistent with the Plan. The management direction contained in the Forest Plan is used in analyzing proposals by prospective Forest users. Subject to valid existing rights, all permits, contracts, and other instruments for occupancy and use of the National Forest System lands covered by this Plan must be consistent with the Management Requirements in both the Forest and Management Area Direction sections. This is required by 16 USC 1604(i) and 36 CFR 219.10(e).

Subsequent administrative activities affecting National Forest System lands, including budget proposals, shall be based on the Plan. The Forest Supervisor may change implementation schedules to reflect differences between proposed annual budgets and actual funds received. Schedule changes resulting from the budget appropriation process will be considered amendments to the Forest Plan. The final annual budget allocation for the National Forest will serve as documentation of the amendment. Changes resulting from the budget appropriation process shall not be considered a significant amendment and will not require the preparation of an environmental impact statement. Budget changes, which over time significantly alter the long-term relationships between levels of multiple-use goods and services projected in the Forest Plan, will be evaluated in conjunction with the update of the RPA Program every five years and may result in an amendment or revision of the Forest Plan.

Management direction is expressed in terms of both Forest Direction and Management Area Direction. Forest Direction consists of goals, objectives and management requirements which are applicable to the entire Forest. Management Area Direction contains management requirements specific to individual areas within the Forest and are applied in addition to the Forest Direction management requirements. Management direction responds to public issues, management concerns, and opportunities within the availability, suitability, and capability of the land and resources.

Implementation of this management direction is the key to translating the goals, objectives, and management requirements stated in the Forest Plan into on-the-ground results. The Forest Plan is implemented through the program development, budgeting, and annual work planning processes. These processes supplement the Forest Plan and make the annual adjustments and changes needed to reflect current priorities within the overall management direction contained in the Plan.

The Forest Plan guides development of multi-year implementation programs for each Ranger District. The Plan's Management Area Direction, objectives, and management requirements are translated into these multi-year program budget proposals which specifically identify the activities and expenditures necessary to achieve the direction provided by the Forest Plan. These implementation programs form the basis for the Forest's annual program budget.

Upon approval of the final budget appropriation for the Forest, the annual program of work is finalized and implemented on the ground. The annual work plan provides the detail to the program budget proposals necessary to guide the land managers and their staffs in responding to the direction of the Forest Plan. The activity files in the data base and the Program Accounting and Management Attainment Reporting System provide information for monitoring the accomplishment of the annual Forest program.

Environmental assessments and environmental impact statements, when needed, will supplement the Forest Plan Environmental Impact Statement. Future environmental analyses will use the Forest Plan direction as an umbrella. Additional detail will be included in the environmental documents for future project level decisions.

Project level decisions will be made using a process that starts with Forest Plan decisions. Initially, all projects will be designed to be entirely consistent with the Forest Plan. Site specific project decisions not covered by the Forest Plan will be identified. Interested agencies and individuals will be notified that a project is being designed to carry out the Forest Plan. Issues and concerns they raise about the site specific project decisions will be considered, and the responsible Forest Service officer will determine if there is a possibility of significant impacts by doing an Environmental Analysis. If the Environmental Analysis shows there will be no significant impacts, the project may be implemented and categorically excluded from further documentation under the National Environmental Policy Act (NEPA). If there is a possibility of significant impacts, an Environmental Assessment will be prepared that considers a no action alternative, which means the project will not be implemented, and other alternatives that might resolve issues and concerns by mitigating impacts. If there will definitely be significant impacts, a Notice of Intent to prepare an Environmental Impact Statement (EIS) will be issued, and an EIS will be prepared to disclose the impacts. In all cases, when a decision has been made to implement a project, interested agencies and individuals will be notified that a decision has been made, and the appeal period (CFR 211.18) is underway. The final project design will then be completed, and the project will be implemented when money is available.

The management direction in this chapter is composed of two major parts: Forest Direction and Management Area Direction.

Forest Direction consists of goals, objectives, and management requirements. The goals and objectives provide broad overall direction regarding the type and amount of goods and services that the Forest will

provide. The management requirements contained in the Forest Direction section set the minimum conditions that must be maintained while achieving the goals and objectives. . .

Management Area Direction consists of management area prescriptions applicable to specific management areas shown on the Forest Plan map. The management area prescriptions contain management requirements specifying which activities will be implemented to achieve the goals and objectives. Management requirements contained in individual management area prescriptions are applied to the specific areas shown on the management area map in the back of this document. Each Ranger District maintains Forest Plan Implementation Maps that show management area boundaries.

FOREST DIRECTION

GOALS

The following goals are concise statements describing a desired condition to be achieved sometime in the future. They are expressed in general terms and are timeless in that they have no specific date by which they are to be completed. These goal statements are the principal basis for the objectives listed later in this Chapter. These goals respond to the planning problem statements listed in Chapter II as well as appropriate laws, regulations, and policies.

The goals of the Forest Plan are to:

Recreation, Cultural and Visual

- Provide a broad spectrum of dispersed and developed recreation opportunities in accordance with identified needs and use trends (Planning Problem Statements 1 and 2).

- Ensure that National Forest developed sites do not compete with the private sector or unnecessarily duplicate other public land facilities and services (Planning Problem Statements 1 and 2).

- Provide increased public access to National Forest System lands, particularly within the Laramie Peak and Thunder Basin Ranger Districts (Planning Problem Statement 1).

- Provide characteristic landscapes that satisfy the adopted visual quality objectives (Planning Problem Statements 1 and 2).

- Locate historical and archeological sites; evaluate them for significance; and preserve, protect, and/or interpret for public information a representative sample of sites associated with and typifying the economic and social history of eastern Wyoming. (Planning Problem Statement 3).

Wilderness

-Manage designated wilderness under the Wilderness Act of 1964 to protect and perpetuate essentially natural bio-physical conditions and to provide for semi-primitive wilderness recreation opportunities (Planning Problem Statement 4).

Wildlife and Fish

-Manage fish and wildlife habitats, including plant diversity, to maintain viable populations of all known native vertebrate species and meet population objectives of management indicator species (Planning Problem Statement 5).

-Maintain or restore the inherent biological, physical and aesthetic values of riparian ecosystems (Planning Problem Statement 5).

Range

-Plan, develop, protect and manage the range resource (as authorized by the basic laws, Secretary's regulations, Forest Service policy, and the Chief's and Regional Forester's goals and objectives) to maintain it in satisfactory or better condition and to allow for a small increase in livestock grazing (Planning Problem Statement 6).

Timber

-Provide for timber harvest to support local dependent industries and management of the many Forest resources in a manner that meets silvicultural needs of timber species, places timber stands under management, minimizes timber management costs, and supplies wood products to meet national needs (Planning Problem Statements 7 and 15).

-Treat vegetation to provide a Forest environment for the uses emphasized and compatible with the Management Area Objectives (Planning Problem Statement 7).

Water

-Improve or maintain water quality to meet or exceed State of Wyoming water quality standards and increase water quantity where possible (Planning Problem Statement 8).

Minerals and Energy

-Accommodate and facilitate the exploration, development, and production of mineral resources in a manner which adequately protects other resources and the environment (Planning Problem Statement 9).

- Whenever feasible, manage mineral related activities to aid in the accomplishment of other resource management objectives (Planning Problem Statement 9).

Lands

-Permit occupancy and use of National Forest System land only upon compliance with conditions for the protection and administration of the National Forest System lands and resources; for the promotion of public health, welfare, safety or convenience; or when public needs cannot be met on private lands (Planning Problem Statement 10).

-Develop a land ownership pattern that will provide for better management, protection, and access to the Forest. Identify federal lands suitable for land exchange to private individuals or for management by other federal or state agencies to help solve problems related to intermixed land ownership patterns, particularly within the Laramie Peak and Thunder Basin Ranger Districts (Planning Problem Statement 10).

-Acquire rights-of-way for Forest Development Roads and trails which cross private lands in order to ensure public access to National Forest System lands (Planning Problem Statement 10).

Facilities

-Develop a transportation system that meets land and resource management needs at lowest cost and least disturbance to the environment (Planning Problem Statement 11).

-Manage motorized travel on the transportation system and off-roads to protect land and resource values at lowest cost and with a minimum of regulations (Planning Problem Statement 12).

Protection

-Minimize hazards from wildfire (Planning Problem Statement 13).

-Follow direction established by 1983 Fire Management Analysis (Appendix J) (Planning Problem Statement 13).

-Control all wildfires in the most cost efficient way (Planning Problem Statement 13).

-Protect air quality, reduce fuel hazards, and use fire to accomplish other resource objectives (Planning Problem Statement 13).

-Monitor effects of insect and disease and treat vegetation to reduce the risk of epidemic outbreaks (Planning Problem Statement 7).

National Grassland

-Demonstrate grassland management and utilization of the Thunder Basin National Grassland's resources and values in harmony with nature's requirements and behavior to foster long-term economic stability and productivity of the land base and quality of life of the people and communities in the area (Planning Problem Statement 14).

OBJECTIVES

The objectives listed in Table III-1 are concise, time-specific, measurable results that respond to the goals listed earlier in this Chapter. These objectives are the basis for the management requirements listed in the Forest and Management Area Direction sections which follow.

TABLE III-1
PROJECTED AVERAGE ANNUAL OUTPUTS/ACTIVITIES

Activity	Units	Time Periods					
		1980	1986- 1990	1991- 2000	2001- 2010	2011- 2020	2021- 2030
<u>RECREATION</u>							
Public Developed	Thousand Visitor Days <u>1/</u>	319	369	476	581	681	693
Downhill Skiing	Thousand Visitor Days	17	24	26	29	34	39
Dispersed (includes off-road motorized)	Thousand Visitor Days	601	709	793	907	1,044	1,123
Off-road Motorized	Thousand Visitor Days	74	84	96	132	154	167
Semi-Primitive Non-motorized	Thousand Acres	168	178	178	178	178	178
Semi-Primitive Motorized	Thousand Acres	192	197	203	214	225	228
Roaded Natural	Thousand Acres	1,235	1,220	1,214	1,202	1,191	1,188
Rural	Thousand Acres	65	65	65	65	65	65
Urban	Thousand Acres	6	6	6	7	7	7
Trail Construction/ Reconstruction	Miles	0	8.5	4.5	2.7	1.8	1.8
<u>WILDERNESS</u>							
Wilderness Management	Thousand Acres	15	79	79	79	79	79
Wilderness Use	Thousand Visitor Days	2.1	10.4	11.4	13.0	15.1	15.2

TABLE III-1 (continued)
PROJECTED AVERAGE ANNUAL OUTPUTS/ACTIVITIES

Activity	Units	Time Periods					
		1980	1986- 1990 ^{2/}	1991- 2000	2001- 2010	2011- 2020	2021- 2030
WILDLIFE & FISH							
Elk Winter Range Carrying Capacity	Thousand Animals	4.0	4.0	4.0	4.1	4.2	4.2
Deer Winter Range Carrying Capacity	Thousand Animals	20.5	21.0	21.5	22.0	22.0	22.0
Structures	Number	40	42	44	46	48	50
Big Game Hunting ^{2/}	Thousand Visitor Days	35.3	35.5	35.5	35.5	35.5	35.5
Small Game Hunting ^{2/}	Thousand Visitor Days	39.5	39.5	41.0	43.0	46.4	48.3
Fishing ^{2/}	Thousand Visitor Days	68.4	71.7	75.5	85.4	100.0	108.4
Nongame Use ^{2/}	Thousand Visitor Days	4.6	4.6	5.0	5.5	6.3	6.8
RANGE	Thousand Animal Unit Months ^{3/}						
Grazing Use	Thousand Animal Unit Months ^{3/}	245	248	252	255	257	257
TIMBER	Million Cubic Feet						
Sale Offerings ^{4/}	Million Cubic Feet	7.04	5.77	6.14	6.14	6.14	6.14
Sawtimber	Million Board Feet	32.2	27.5	29.3	29.3	29.3	29.3
Roundwood	Million Board Feet	5.0	5.0	5.0	5.0	5.0	5.0

TABLE III-1 (continued)
PROJECTED AVERAGE ANNUAL OUTPUTS/ACTIVITIES

Activity	Units	Time Periods					
		1980	1986- 1990	1991- 2000	2001- 2010	2011- 2020	2021- 2030
Roundwood	Million Cubic Feet	.6	1.0	1.0	1.0	1.0	1.0
Reforestation	Acres						
Natural		1,400	2,039	2,394	1,437	1,454	2,460
Planting		0	102	120	72	73	123
Timber Stand Improvement	Acres	1,750	2,250	3,076	2,039	2,394	1,437
Firewood (Personal and Commercial)	Cords	22,400	22,400	22,400	22,400	22,400	22,400
							:
<u>WATER</u>							
Water Yield	Million Acre-Feet	1.017	1.024	1.026	1.026	1.027	1.028
Water Meeting Water Quality Goals	Million Acre-Feet	0.915	1.012	1.019	1.021	1.023	1.026
<u>MINERALS</u>	Operating Plans	1,073	1,073	924	790	735	610
<u>HUMAN & COMMUNITY</u>							
Senior Community Service Employment Program	Enrollee Years	16	16	25	25	25	25
YCC	Enrollee Years	0	7	7	7	7	7
<u>LANDS</u>							
Purchase & Acquisition Acres		0	0	0	0	0	0

TABLE III-1 (continued)

PROJECTED AVERAGE ANNUAL OUTPUTS/ACTIVITIES

Activity	Units	Time Periods					
		1980	1986- 1990	1991- 2000	2001- 2010	2011- 2020	2021- 2030
Exchange	Acres	160	160	160	160	160	160
Right-of-Way Acquisition	Cases	5	10	10	10	10	10
Land Line Location	Miles	15	25	25	25	25	25
<u>SOILS</u>							
Resource Improvement	Acres	200	247	247	195	195	195
<u>FACILITIES</u>							
Road Construction and for General Use	Miles Annually	0	0	1	1	1	0
Road Reconstruction for General Use	Miles Annually	0	11.8	22.9	57.3	57.3	57.3
Road Construction for Timber Sales	Miles Annually	30	32.5	34.6	28.9	23.2	17.0
Road Reconstruction for Timber Sales	Miles Annually	15	16.0	17.0	22.7	28.4	34.6
Road Construction for Minerals	Miles Annually	40	40	40	40	40	40
Roads Temporarily Closed or Revegetated	Miles Annually	-	30.9	33.2	52.1	52.1	52.1
<u>PROTECTION</u>							
Fuel Treatment ^{5/}	Acres	1,400	2,039	2,394	1,437	1,454	2,460
<u>EXPENDITURES</u> ^{6/}							
Operation and Maintenance	Thousand Dollars		3,463	3,633	3,840	3,760	3,998

TABLE III-1 (continued)
PROJECTED AVERAGE ANNUAL OUTPUTS/ACTIVITIES

Activity	Units	Time Periods					
		1980	1986- 1990	1991- 2000	2001- 2010	2011- 2020	2021- 2030
Capital Investments	Thousand Dollars	--	1,834	2,337	3,150	3,210	3,095
General Administration	Thousand Dollars	--	848	955	1,118	1,112	1,135
Total Budget	Thousand Dollars	5,562	6,145	6,925	8,108	8,062	8,229
<u>RETURNS 6/</u>							
Returns to Treasury Other than Minerals	Thousand Dollars	644	1,841	1,999	2,133	2,230	2,173
Minerals	Thousand Dollars	1,464	9,300	12,400	16,100	16,100	16,100

1/ Recreation Visitor Day = 12 hours of recreation for one person or one hour of recreation for 12 persons or any combination thereof.

2/ Wildlife and fishing use figures are also included in dispersed recreation; they are not additive.

3/ Animal Unit Month = the amount of forage consumed by one mature cow or its equivalent in a one-month period.

4/ The same sale offerings are expressed in cubic feet and board feet; they are not additive.

5/ Number of acres treated for fuel reduction and site preparation.

6/ All expenditures and returns are in constant 1978 first quarter dollars.

MANAGEMENT REQUIREMENTS

The management requirements in this Forest Direction section (pages III-14 through III-84) set the baseline conditions that must be maintained throughout the Forest in carrying out this Forest Plan. They establish the environmental quality requirements, natural and depletable resource requirements, and mitigating measures that apply to all areas of the Forest. Any necessary additions to them are included in the management requirements for the individual management areas. The management requirements listed in the Management Area Direction section (Pages III-89 through III-234) are applied in addition to those in this section. Substantive changes which alter the intent of these management requirements may not be made without amending or revising the Forest Plan. Editorial and other minor modifications to these management requirements which do not alter their intent may be made without amending or revising the Forest Plan.

In addition to the management requirements that will apply to all areas of the Forest, there are unique guidelines associated with the Thunder Basin National Grassland as described in enabling legislation. Management of the National Grassland places substantial emphasis on favorably influencing sound land management in the area. Specifically, the function of the National Grassland is to provide conservation and utilization programs for all resources which will:

- Promote the development of grassland agriculture and sustained-yield management of the forage, fish and wildlife, timber, water, and recreation resources, and wise use of the mineral resources in the area.
- Demonstrate sound and practical principles of land use for the area.
- To the extent feasible, integrate the federally-owned land with the associated private and other public lands into natural management units which favorably influence development of sound land conservation and utilization practices suitable for use in the area.
- Provide a biological benchmark in man's quest to live harmoniously with extremes of climate, land capability, and economic fluctuations.
- Serve as a model to show how responsive government can positively affect economical, cooperative planning and management at the local level. Management by grazing association under terms of appropriate agreements has been and will continue to be a strength of these units.
- Serve as an applied range management laboratory testing the latest techniques in grassland agriculture and determining and demonstrating sound land management and sustained production.
- Provide for rural development and economic and social stability of local communities.

Grazing Associations are an important element in the functioning of National Grassland administration. They establish rules of conduct, issue livestock grazing permits, administer permit compliance, administer ownership and commensurability requirements for obtaining a permit, integrate lands into logical grazing units, participate in demonstrating sound land use, assist in preparing grazing allotment management plans and monitoring compliance with the plans, collect fees, control unauthorized use, install range improvements and maintain existing improvements, and provide for fire detection and suppression.

In addition to the Forest Direction and Management Area Direction that follows, this Plan is in compliance with requirements of the Clean Water Act, the Safe Drinking Water Act, and all substantive and procedural requirements of federal, state and local governmental bodies with respect to the provision of public water systems and the disposal of waste water. Measures will be taken under the Plan to minimize risk of flood loss, to restore and preserve floodplain values and to protect wetlands.

The management requirements are presented in three columns: Management Activities, General Direction Statements, and Standards and Guidelines.

Management Activities are work processes that are conducted to produce, enhance, or maintain levels of outputs, or to achieve administrative and environmental quality objectives. Management Activities are identified by a code number and title defined in the Management Information Handbook (FSH 1309.11) dated July, 1980. In some cases, management activities were grouped under one activity when it was not appropriate to develop separate requirements. National Forest System lands will be managed to comply with laws, regulations, executive orders, direction in the Forest Service Manual, and Regional Acceptable Work Standards.

General Direction Statements specify the actions, measures, or treatments (management practices) to be done when implementing the management activity or the condition expected to exist after the general direction is implemented.

Standards and Guidelines are quantifications of the acceptable limits within which the General Direction is implemented.

Identification numbers shown in parentheses following each General Direction and Standard and Guideline statement are intended to facilitate future tiering to the Forest Plan and Final Environmental Impact Statement. Users and reviewers of the Plan will find these identification numbers useful for cross-referencing and identification of mitigation measures.

Management requirements included in overall Forest Direction are detailed on the following pages.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

Diversity on
National Forests
and National
Grasslands
(A00)

1. Maintain structural diversity of vegetation on units of land 5,000 to 20,000 acres in size, or fourth-order watersheds, that are dominated by forested ecosystems.
(0061)

a. Maintain or establish a minimum of 20 percent of the forested area within a unit to provide vertical diversity except where the forest vegetation is comprised of more than 81 percent lodgepole pine in a unit, the vertical diversity may be less than 20 percent.
(7000MB)

b. Maintain or establish a minimum of 30 percent of the forested area within a unit to provide horizontal diversity.
(6031)

c. In forested areas of a unit, maintain at least 5 percent in grass/forb stages and at least 10 percent of the conifer potential natural vegetation type in old growth. This 10 percent must meet true old growth characteristics (if available) and occur in 30 acre or larger patches. Spruce/fir is the preferred type for old growth.
(7001MB)

d. In forested units, create or modify create openings so they have natural appearing shapes. Openings larger than 26 acres should be designed so they have a Patton edge shape index of at least 1.4. Openings smaller than 26 acres are not constrained by the diversity index.
(7002MB)

2. Retain existing medium- or high-contrast edges within forested diversity units.
(0060)

APPENDIX B

MANAGEMENT PRESCRIPTION 2A

(From the Land and Resource Management Plan for the Medicine Bow N.F.)

(Emphasis is on semi-primitive motorized recreation opportunities.)

A. MANAGEMENT PRESCRIPTION SUMMARY

Management emphasis is for semi-primitive motorized recreation opportunities such as snowmobiling, four-wheel driving, and motorcycling both on and off roads and trails. Motorized travel may be restricted or seasonally prohibited or restricted to designated routes to protect physical or biological resources.

Visual resources are managed so that management activities remain visually subordinate. Past management activities such as historical changes caused by early mining, logging, and ranching may be present which are not visually subordinate but appear to have evolved to their present state through natural processes. Landscape rehabilitation is used to restore landscapes to a desirable visual quality. Enhancement aimed at increasing positive elements of the landscape to improve visual variety is also used.

The harvest method by forest cover type is clearcutting in aspen and lodgepole pine, and shelterwood for all other forest cover types.

Mineral and energy resources activities are generally compatible with goals of this management area subject to appropriate stipulation provided in management activities G00-G07 in Forest Direction.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

Visual Resource Management (A04)

1. Design and implement management activities to provide a visually appealing landscape. Enhance or provide more viewing opportunities and increase vegetation diversity in selected areas.
(0150)

a. Do not exceed an Adopted Visual Quality Objective (VQO) of Partial Retention.
(6223)

b. FS System travel routes are Sensitivity Level one.
(6224)

c. Apply rehabilitation practices where the above objectives are not currently being met.
(6068)

d. Manage visual resources using the above standards in accordance with FSM 2380 and FSM 2309.16 through FSM 2309.25.
(6225)

Dispersed Recreation Management (A14 and 15)

1. Emphasize semi-primitive motorized recreation opportunities. Increase opportunities for primitive road motorized trail use. Specific land areas or travel routes may be closed seasonally or year-round for compatibility with adjacent area management, to prevent resource damage, for economic reasons, to prevent conflicts of use, and for user safety.
(0152)

a. Specify off-road vehicle restrictions based on ORV use management (FSM 2355, R2 Supp. 88).
(6083)

2. Manage use to allow low to moderate contact with other groups and individuals.
(0238)

a. Maximum use and capacity levels are:

-Trail and camp encounters during peak use days are less than 30 other parties per day.

-Trail and area-wide use capacity:

ROS Class - Semi-Primitive
Motorized

Use Very Moder- High
Level Low Low ate

MANAGEMENT
ACTIVITIESGENERAL
DIRECTIONSTANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

On Trails

PAOT/ mile	2.0	3.0	9.0	11.0

Area-wide PAOT/ acre	.004	.008	.05	.08

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the RCS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.

(6227)

3. Permit undesignated sites in Frissell condition class 1 through 3 where unrestricted camping is permitted.
(0174)

a. Campsite condition class based upon Frissell, S.S.; Journal of Forestry, May, 1978.
(6278)

4. Facilities provided include development level 1 and 2 campgrounds, trails suitable for motorized trailbike use, local roads with primitive surface and parking lots at trail heads. Provide signing compatible with intended use.
(0153)

a. See FSM 2331, FSM 7732, FSH 7709.12 (Trails Handbook), FSH 7109.11a and 11b (Sign Handbook).
(6226)

5. Encourage development of private sector recreation oriented support services.
(0161)

Range Resource
Management
(D02)

1. Manage livestock distribution and stocking rates to be compatible with recreation use. Locate structural improvements to meet visual quality objectives.
(0158)

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

Silvicultural
Prescriptions
(EQ3, 06 & 07)

1. Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, diversity and insect and disease control.
(0159)

2. Vegetation treatment of forested areas, including but not limited to clearcutting, shelterwood and selection harvest, will be used to work towards a forest environment that appears to be a mature forest with little human caused disturbance.
(1101MB)

3. Manage forest cover types using the following harvest methods:

- Clearcut in aspen and lodgepole,
- Shelterwood in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.
(0463)

4. Apply intermediate treatments to maintain growing stock level standards.
(0140)

5. For management purposes, a cut-over area is considered an opening until minimum stocking standards by forest cover type and site productivity are met.
(1066MB)

a. Apply harvest methods to forest cover types as specified in General Direction on at least 80% of the forest cover type. Up to 20 percent of the type may be treated using other appropriate harvest methods specified in Forest Direction. Follow silvicultural standards as specified in Forest Direction Requirements.
(7190MB)

a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25

MANAGEMENT
ACTIVITIESGENERAL
DIRECTIONSTANDARDS &
GUIDELINESCONTINUATION OF:
Silvicultural
Prescriptions
(EO3, 06 & 07)Mixed
Conifers 190 25Lodgepole
Pine 150 25Engelmann
Spruce - Sub-
alpine fir 150 25

Aspen 300 25

Forest Cover Type	Crown Closure (Percent)	Distri- bution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole Pine	30	75%
Engelmann Spruce- Subalpine fir	30	75%
Aspen	30	75%

1/ Applies to trees specified as
minimum stocking level.2/ Percent of plots or transects
that are stocked.
(6316)Special Use
Management (Non
-Recreation)
(J01)1. Permit special uses which are complementary and compat-
ible with the kind and development level of the associated
Forest Service facilities within the area.
(0464)a. Reference the ROS Users Guide.
(6230)Transportation
System
Management
(LO1 & 20)1. Roads will not exceed design guides specified in FSM
7721.3 for local roads.
Maintain open local roads at Maintenance Level 2.
(0494)

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

Trail
System
Management
(L23)

1. Maintain existing motorized routes or construct new routes needed as part of the transportation system. Provide loop routes of one-half to one day's travel time with at least one-half the total route located within the semi-primitive motorized ROS class and utilizing primitive local roads and/or trails suitable for motorized trail bike travel.
(0164)

APPENDIX C

MANAGEMENT PRESCRIPTION 3A

(From the Land and Resource Management Plan for the Medicine Bow N.F.)

MANAGEMENT PRESCRIPTION 3A

(Emphasis is on semi-primitive nonmotorized recreation in loaded or nonloaded areas.)

A. MANAGEMENT PRESCRIPTION SUMMARY

Management emphasis is for semi-primitive nonmotorized recreation in both loaded and unloaded areas. Recreation opportunities such as hiking, horseback riding, hunting, cross-country skiing, etc., are available. Seasonal or permanent restrictions on human use may be applied to provide seclusion for wildlife such as nesting for raptors, big-game rearing areas, mammals (mountain lion, wolverine, etc.) with large home ranges. Visual resources are managed so that management activities remain visually subordinate.

Investments in compatible resource uses such as livestock grazing, mineral exploration and mineral development occur, but travel on roads is managed to provide seclusion. Commercial and noncommercial tree harvest occur. The harvest method by forest cover type is clearcutting in aspen and lodgepole pine and shelterwood in interior ponderosa pine, mixed conifers, and Engelmann spruce-subalpine fir.

B. MANAGEMENT REQUIREMENTS

MANAGEMENT ACTIVITIES

GENERAL DIRECTION

STANDARDS & GUIDELINES

Visual Resource
Management
(A04)

1. Design and implement management activities to provide a visually appealing landscape. Enhance or provide more viewing opportunities and increase vegetation diversity in selected areas.
(0150)

a. Do not exceed an Adopted Visual Quality Objective (VQO) of Partial Retention.
(6223)

b. FS System travel routes are Sensitivity Level one.
(6224)

c. Apply rehabilitation practices where the above objectives are not currently being met.
(6068)

d. Manage visual resources using the above standards in accordance with FSM 2380 and FSM 2309.16 through FSM 2309.25.
(6225)

2. Use management practices to promote the following:

Scale and size activities in foreground areas to repeat line, form, texture and color of the characteristic landscape.

Retain diversity of existing landscape by encouraging spruce/fir and aspen in foreground areas.

Maintain the size, scale and shape of harvest form in middleground and background areas to reflect natural occurrences in the landscape. Ensure that size, scale, and shape of existing form are repeated by activities.

For further details: See USDA Forest Service, National Forest Landscape Management, Volume 2, Chapter Timber, 1981.
(1065MB)

MANAGEMENT PRESCRIPTION 3A

(Emphasis is on semi-primitive nonmotorized recreation in roaded or nonroaded areas.)

A. MANAGEMENT PRESCRIPTION SUMMARY

Management emphasis is for semi-primitive nonmotorized recreation in both roaded and unroaded areas. Recreation opportunities such as hiking, horseback riding, hunting, cross-country skiing, etc., are available. Seasonal or permanent restrictions on human use may be applied to provide seclusion for wildlife such as nesting for raptors, big-game rearing areas, mammals (mountain lion, wolverine, etc.) with large home ranges. Visual resources are managed so that management activities remain visually subordinate.

Investments in compatible resource uses such as livestock grazing, mineral exploration and mineral development occur, but travel on roads is managed to provide seclusion. Commercial and noncommercial tree harvest occur. The harvest method by forest cover type is clearcutting in aspen and lodgepole pine and shelterwood in interior ponderosa pine, mixed conifers, and Engelmann spruce-subalpine fir.

MANAGEMENT
ACTIVITIESGENERAL
DIRECTIONSTANDARDS &
GUIDELINES

Dispersed
Recreation
Management
(A14 and 15)

1. Emphasize semi-primitive nonmotorized recreation opportunities. Specific land areas or travel routes may be opened seasonally and with specific authorization to accomplish resource management activities. The area is never open for motorized recreation activities except for snowmobiles operating on snow when such use is compatible with the overall recreation and wildlife management objectives.
(0392)

2. Manage use to allow low to moderate contact with other groups and individuals.
(0238)

a. Prohibit or restrict motorized vehicle use (R2 FSH 2309.26).
(6228)

a. Maximum use and capacity:
-Trail and camp encounters during peak use days are less than 30 other parties per day.
-Trail and area-wide use capacity:

ROS Class - Semi-Primitive
Nonmotorized

Use Level	Very Low	Moder- Low	High ate
On Trails PAOT/ mile	2.0	3.0	9.0 11.0
Area-wide PAOT/ acre	.004	.008	.05 .08

Reduce the above use level coefficients as necessary to reflect usable acres, patterns of use, and general attractiveness of the specific management area type as described in the ROS Users Guide, Chapter 25.

Reduce the above use levels where unacceptable changes to the biophysical resources will occur.
(6378)

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:

Dispersed
Recreation
Management
(A14 and 15)

3. Provide facilities such as foot and horse trails, single lane local intermittent roads with primitive surface used as trails, development level 1 and 2 campgrounds, and necessary signing.
(0394)

a. See FSM 2331, FSM 7732, FSM 7709.12 (Trails Handbook), FSM 7109.11, and 11b (Sign Handbook).
(6226)

Recreation
Management
(Private and
Other Public
Sector)
(A16)

1. Encourage development of private sector recreation oriented support services.
(0161)

Wildlife
Habitat
Improvement and
Maintenance
(002, 04, 05
and 06)

1. Maintain habitat for old growth dependent species.
(1118MB)

a. Management areas will be managed to attain at least 20 percent in old growth and occur in 30 acre or larger patches.
(7081MB)

2. Maintain effective wildlife habitat.
(1127MB)

a. For deer and elk:

Provide habitat effectiveness (minimum wildlife disturbance) through closures or road management resulting in low density dispersed nonmotorized recreation use.

Locate roads and trails to avoid key areas such as primary feed areas, big game rearing areas and migration routes.
(7096MB)

b. Maintain or establish tall forest cover along the edges of all parks, meadows, riparian areas, collection roads, and natural openings. Cover will extend from

CONTINUATION OF:

Wildlife
Habitat
Improvement and
Maintenance
(C02, 04, 05
and 06)

all edges for at least 600 feet to provide big game hiding cover. Edges and cover in spruce/fir forest will be continuous. Edges and cover in lodgepole pine, Douglas fir and ponderosa pine may be altered as follows:

Ten percent of an edge may be altered and be in the grass-forb or shrub-seedling stages at one time; no more than 100 continuous feet of edge may be altered at one time; at least 100 feet of tall forest cover (at least pole stage) will separate induced edges.

Fifty percent of the area managed for hiding cover around openings may be treated at one time, provided that forest vegetation (at least pole stage) providing big game hiding cover will be retained at all times on the other 50 percent of the area.
(7101MB)

3. Maintain 50% of the management area in cover.
(1128MB)

a. Maintain at least 20% of the area in thermal cover. Thermal cover must occur in at least 30 acre patches for elk and at least 7 acre patches for deer.
(7108MB)

b. Maintain at least 40% of the area in hiding cover. Hiding cover includes old growth, sapling, and pole stands dense enough to hide 90% of an elk or deer at 150 feet and must occur in at least 30 acre patches for elk. Deer hiding cover requirements will be set if the requirements for elk are met.
(7109MB)

MANAGEMENT
ACTIVITIESGENERAL
DIRECTIONSTANDARDS &
GUIDELINESRange Resource
Management
(D02)

1. Manage livestock distribution and stocking rates to be compatible with recreation use. Locate structural improvements to meet visual quality objectives.
(0158)

Silvicultural
Prescriptions
(E03, 06 & 07)

1. Manage tree stands using both commercial or noncommercial methods. Enhance visual quality, diversity and insect and disease control.
(0159)

2. Vegetation treatment of forested areas, including but not limited to clearcutting, shelterwood, and selection harvest, will be used to work towards a forest environment that appears to be a mature forest with little human caused disturbance.
(1103MB)

3. Manage forest cover types using the following harvest methods.

- Clearcut in aspen and lodgepole.
- Shelterwood or clearcut in interior ponderosa pine, mixed conifer and Engelmann spruce-subalpine fir.

(1463MB)

4. Apply intermediate treatments to maintain growing stock level standards.
(0140)

5. For management purposes, a cut-over area is considered an opening until minimum stocking standards by forest cover type and site productivity are met.
(1066MB)

- a. Apply harvest methods to forest cover types as specified in General Direction on at least 80% of the forest cover type. Up to 20 percent of the type may be treated using other appropriate harvest methods specified in Forest Direction. Follow silvicultural standards as specified in Forest Direction Requirements.
(7190MB)

- a. When the Visual Quality Objective of an area is partial retention, the regenerated stand shall meet or exceed all of the following characteristics before a cut-over area is no longer considered an opening:

MANAGEMENT
ACTIVITIESGENERAL
DIRECTIONSTANDARDS &
GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(E03, 06 & 07)

Forest Cover Type	Minimum Stocking Level (Trees/ acre)	Tree Height 1/ (% of the adjacent mature stand height)
Inland Ponderosa Pine	190	25
Mixed Conifers	190	25
Lodgepole Pine	150	25
Engelmann Spruce - Sub- alpine fir	150	25
Aspen	300	25
Forest Cover Type	Crown Closure (Percent)	Distri- bution 2/
Inland Ponderosa Pine	30	70%
Mixed Conifers	30	75%
Lodgepole Pine	30	75%
Engelmann Spruce- Subalpine fir	30	75%
Aspen	30	75%

MANAGEMENT
ACTIVITIES

GENERAL
DIRECTION

STANDARDS &
GUIDELINES

CONTINUATION OF:
Silvicultural
Prescriptions
(EO3, 06 & 07)

- 1/ Applies to trees specified as
minimum stocking level.
2/ Percent of plots or transects
that are stocked.
(6316)

5. Use trees of the best genetic quality available which
are adapted to the planting site when supplemental
planting. (Reference FSM 2475)
(0141)

Water Resource
Improvement and
Maintenance
(F05 and 06)

1. Permanent openings may be employed to enhance
water production.
(0497)

Special Use
Management (Non
-Recreation)
(J01)

1. Permit special uses which are complementary and
compatible with the objectives of the management
area and which do not change the ROS classification.
(0395)

a. Reference the ROS Users Guide.
(6230)

2. Permit special uses which are complementary and compat-
ible with the kind and development level of the associated
Forest Service facilities within the area.
(0464)

Local Road
Construction and
Reconstruction
(L11, 12, & 13)

1. Local roads may be constructed for non-recreation
purposes.
Close local roads to public motorized use, and
prohibit off-road vehicle (ORV) use.
Maintain local roads to Level 1 during periods
when access for resource utilization is not required.
(0396)

III-120